

II. **AMENDMENTS TO CLAIMS AND LISTING OF CLAIMS**

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17. (New) Sensor for the measurement of tissue perfusion comprising a reservoir (4) for Containing at least one fluid or gaseous tracer and being defined by a reservoir wall having a tracer-permeable reservoir wall portion, and a detection cavity (5) defined by a detection cavity wall having a tracer-permeable detection cavity wall portion, said tracer-permeable wall portions of the reservoir wall and the detection cavity wall, respectively, communicating with the surroundings, characterized in that the reservoir (4) and the detection cavity (5) are mutually interspaced, elongated cavities and that the tracer-permeable reservoir wall portion (3;

14') and the tracer permeable detection cavity wall portions (3; 15') are elongated side wall portions.

18. (New) Sensor according to claim 17, characterized in, that the reservoir (4) and the detection cavity (5) are cylindrical and arranged in parallel.

19. (New) Sensor according to claim 17 or 18, characterized in that the tracer-permeable wall portion (14') of the reservoir (4) and the tracer permeable wall portion (15') of the detection cavity (5) are separate, mutually interspaced wall portions.

20. (New) Sensor according to claim 19, characterized In that the reservoir (4) and the detection cavity (5) are separated by a tracer-impermeable barrier (19).

21. (New) Sensor according to claim 19, characterized in that the reservoir (4) is defined by a tracer-permeable, tubular body (14) and that the detection cavity (5) is defined by a tracer-permeable, tubular body (15), and further that two bodies (14, 15) are interconnected by means of the tracer-impermeable barrier (19).

22. (New) Sensor according to claim 17 or 18, characterized in that the tracer-permeable wall portion of the reservoir (4) and the tracer-permeable wall portion of the

detection cavity (5) both are formed by a common tracer-permeable barrier (3) made from a tracer-permeable material, said tracer-permeable barrier (3) having a first longitudinally extending surface (18) being in contact with the surroundings, a second longitudinally extending surface (13) defining a portion of the detection cavity (5) and a third longitudinally extending surface (12) defining a portion of the tracer reservoir (4).

23. (New) Sensor according to claim 22, characterized in that the tracer reservoir (4) is partly defined by a substantially U-shaped profile member (1), and that the detection cavity (5) is partly defined by a substantially U-shaped profile member (2) and further that the tracer-permeable barrier (3) sealingly engages the U-shaped profile members (1, 2) so as to close open sides (12, 13) thereof,

24. (New) Sensor according to claim 17 or 18, characterized in that the tracer-permeable reservoir wall portion (3; 14') and the tracer-permeable detection cavity wall portion (3; 15') extend substantially over the entire length of the sensor.

25. (New) Sensor according to claim 17 or 18, characterized in that the sensor is substantially symmetrical about a longitudinal plane (11).

26. (New) Sensor according to claim 17 or 18, characterized in that it comprises 15 a series of reservoirs (4) and detection cavities (5) placed in side-by-side relationship.